Stat 305
Fall 2015

Note: read the syllabus carefully. There are important changes from previous semesters.

1. Class meets Tu-Thu, 9:25 - 10:40. HRZ 212.

2. Labs: Lab times and locations depend on the section for which you registered..

3. Text: Fundamental of Biostatistics, Rosner, 7th edition.

4. Professor: E. Neely Atkinson

   - office: DH 2099
   - office hours: Tu-Thu 11 AM - Noon and by appointment
   - email: enatk@rice.edu

5. Grading. Your final grade will be based on homework (20%), the two exams (20% each), and the final (40%). To help insure similar grades across our introductory courses and sections, the final grade distribution in this class is expected to include approximately 50% or fewer A's. Final grades may be curved to reflect this policy.

6. Exams. There will be two exams and a comprehensive final. All tests are in class. Be sure to check the schedule for the final before making any travel plans for the end of the semester.

7. Homework. There will generally be a homework assignment each week in which class meets. The homework assignments will be posted to Owlspace. I will try to remember to repeat the assignment in class, but even if I forget, the assignment is still due, so be sure to watch Owlspace. Homework should be submitted electronically as a single file. The purpose of homework is to learn and practice the material covered in lectures and the text. You may use whatever resources you find helpful to work the assignments, including other students and the Web. However, you must turn in your own work. submissions which are copies of another student's work will be considered a violation of the Honor Code.

   Late submissions will not be accepted.

8. Software. We will use the R programming language language for class. No prior knowledge of R is expected. R will be available in the labs. You may also download and install R for free on your personal computer; see `http://cran.r-project.org`.

9. Getting help. Class lectures will cover material in the book. There will be labs to help you learn R and to answer questions about problem solving. I will also hold regular office hours and will respond to emails.

10. Labs. There will be a weekly lab. The labs will provide instruction in using R and will provide assistance with the homework. Labbies will also respond to questions about course material.

11. Course Outline. This is my proposed schedule. It may be adjusted as various topics may go slower or quicker than I anticipate.

    (a) Week 1 8/24 - 8/30: Chapter 2 - descriptive statistics
    (b) Week 2 8/31 - 9/6: Chapter 3 - probability
    (c) Week 3 9/7 - 9/13: Chapter 4 - discrete distributions
    (d) Week 4 9/14 - 9/20: Chapter 5 - continuous distributions
    (e) Week 5 9/21 - 9/27: Chapter 6 - estimation
    (f) Week 6 9/28 - 10/4: Chapter 7 - hypothesis testing; one-sample
    (g) Week 7 10/5 - 10/11: Chapter 7 - continued
    (h) Week 8 10/12 - 10/18: review and test 1
    (i) Week 9 10/19 - 10/25: Chapter 8 - hypothesis testing; two-sample
    (j) Week 10 10/26 - 11/1: Chapter 9 - nonparametric methods
    (k) Week 11 11/2 - 11/8: Chapter 10 - categorical data
    (l) Week 12 11/9 - 11/15: Chapter 11 - regression
    (m) Week 13 11/16 - 1/22: Chapter 13 - epidemiologic studies
    (n) Week 14 11/23 - 11/29: Chapter 13 - continued
    (o) Week 15 11/30 - 12/4: review and test 2.

12. If you know that you will be gone due to official school activities, contact me before your absence to make arrangements for any homework, labs, or tests during your absence.

13. If you have a disability that requires accommodation, please contact both me and Disability Support Services in Allen Center. Possible accommodations include include, but are not limited to, extra time for tests, special settings for tests, the services of a note taker, and permission to record lectures. I will treat your request as confidential and make the accommodation as confidential as is practically possible.

Purposes of class. This course is meant to give you a solid grounding in the basic principles of statistical analysis with an emphasis on biostatistics. At the end of this course:

- You will understand the basic principles which underlie all statistical analyses.
- You be be able to perform a range of basic statistical analyses.

- You will be able to understand the ideas behind more advanced analyses, even if you do not completely understand all the details of the analyses or are not able to perform them yourself.
- You will be able to consult effectively with an expert statistician if the need arises in your work for the use of advanced techniques.